

WHAT IS CLAIMED IS:

1. A method for inspecting a head unit moving device, the method comprising the steps of:

running a inspection use tape in which a servo signal is written  
5 displaced in a width direction of a magnetic tape at a predetermined frequency and amplitude;

measuring a position of a head unit practically moved in a width  
direction of said inspection use tape in response to said servo signal; and

calculating a difference between the position and a position to  
10 be instructed so as to move said head unit in response to said servo signal,

wherein said head unit moving device moves said head unit having a  
servo signal reading head, a data signal recording head, and a data signal  
reproducing head in the width direction of said magnetic tape in response to  
said servo signal read from said magnetic tape by said servo signal reading  
15 head.

2. A manufacture method of an inspection use tape used for an inspection  
of a magnetic tape drive,

wherein with displacing a servo signal writing head writing a servo  
signal in a magnetic tape in a width direction of said magnetic tape at a  
20 predetermined frequency and amplitude, the servo signal is written in said  
magnetic tape.

3. A manufacture method of an inspection use tape used for an inspection  
of a magnetic tape drive,

wherein with displacing a servo signal writing head writing a servo  
25 signal in a magnetic tape in a width direction of said magnetic tape at a  
predetermined amplitude and different frequencies, the servo signal is written

in said magnetic tape.

4. A manufacture method of an inspection use tape according to claim 2, wherein a tape edge detector detecting a position of a tape edge of said magnetic tape is disposed directly near said servo signal writing head, and  
5 said servo signal writing head is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

5. A manufacture method of an inspection use tape according to claim 3, wherein a tape edge detector detecting a position of a tape edge of said  
10 magnetic tape is disposed directly near said servo signal writing head, and said servo signal writing head is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

6. An inspection use tape manufactured by the manufacture method of the  
15 inspection use tape according to claim 2.

7. An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 3.

8. An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 4.

9. An inspection use tape manufactured by the manufacture method of the  
20 inspection use tape according to claim 5.

10. An inspection apparatus of a head unit moving device according to claim 1, which is equipped with a device reel, a device reel driving device rotationally driving said device reel, a tape reel driving device rotationally driving a tape  
25 reel, a head unit having a servo signal reading head reading a servo signal written in an inspection use tape, an optical sensor detecting a position of said

head unit, and a responsivity inspecting circuit inspecting a responsivity of the head unit by calculating a difference between a position to be instructed so as to move the head unit in response to a servo signal read from said inspection use tape and a position detected by said optical sensor.

5 11. A servo writer to implement the manufacture method of the inspection use tape according to claim 2, which is equipped with a supply reel supplying a magnetic tape, a winding reel winding the magnetic tape supplied from the supply reel, a winding reel driving device driving the winding reel, a servo signal writing head writing a servo signal in said magnetic tape, and a head  
10 moving device displacing said servo signal writing head in the width direction of said magnetic tape at a predetermined frequency and amplitude.

12. A servo writer to implement the manufacture method of the inspection use tape according to claim 3, which is equipped with a supply reel supplying a magnetic tape, a winding reel winding the magnetic tape supplied from the  
15 supply reel, a winding reel driving device driving the winding reel, a servo signal writing head writing a servo signal in said magnetic tape, and a head moving device displacing said servo signal writing head in the width direction of said magnetic tape at a predetermined amplitude and different frequencies.

13. A servo writer according to claim 11 which is equipped with a tape edge  
20 detector detecting a position of a tape edge of said magnetic tape directly near said servo signal writing head,

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

25 14. A servo writer according to claim 12 which is equipped with a tape edge detector detecting a position of a tape edge of said magnetic tape directly

near said servo signal writing head,

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

5 15. A servo writer of an inspection use tape according to claim 11, wherein a head moving means is a piezoelectric element.

16. A servo writer of an inspection use tape according to claim 12, wherein a head moving means is a piezoelectric element.

10 17. A servo writer of an inspection use tape according to claim 13, wherein said head moving means is a piezoelectric element.